STOR 664 Homework 4, Fall 2023

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Due: Thursday November 2

From *original* version of Smith & Young course text (posted on canvas at start of semester):

1. Chapter 3, question 19, p. 172 with following changes:

   (a) In part (b), add: for whatever model you finally fit, test the residuals using the correlation, Kolmogorov-Smirnov, Cramér-von Mises and Anderson-Darling tests, and comment on the results — do they in fact support the assumption of normally distributed residuals?

   (b) In part (d), omit (ii) (since we haven't talked about simultaneous testing)

2. Chapter 4, question 2, p. 195

3. Chapter 4, question 11, p. 196

4. Chapter 4, question 12, p. 197

For the datasets, refer to the following weblinks:

1. Protein data for questions 3.19, 4.11:

   http://rls.sites.oasis.unc.edu/faculty/rs/source/Data/protein.dat

2. Prater's gasoline data for question 4.12 (two versions):

   http://rls.sites.oasis.unc.edu/faculty/rs/source/Data/prater.dat

   http://rls.sites.oasis.unc.edu/faculty/rs/source/Data/prater1.dat